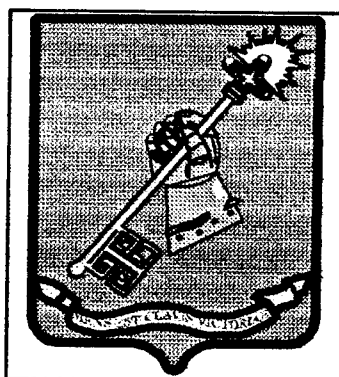


**"TRUE" TACTICAL RESERVES IN STRIKING FORCE
OPERATIONS:
PILFERY OF COMBAT POWER AT THE
LINE OF CONTACT?**

**A Monograph
by**

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Infantry**



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ABSTRACT

TRUE TACTICAL RESERVES IN STRIKING FORCE OPERATIONS: PILFERY OF COMBAT POWER AT THE LINE OF CONTACT? by MAJ Gregory J. Borden, USA, 45 pages.

This monograph considers the utility of constituting both a striking force and a supplemental tactical reserve when conducting a mobile defense. It considers the conclusions of a 1993 Combined Arms Command (CAC) study of the mobile defense which recommended that both an offensively-oriented striking force and a reserve be maintained. This monograph considers whether withholding two maneuver forces from the initial battle at the line of contact reduces or increases the risk of defeat in the mobile defense.

The monograph first examines the reserve in classical theory and practice to establish the fundamental nature of tactical reserves. It then explores the evolution of the practice of withholding forces from the initial battle in the modern era, with particular emphasis on American doctrine. The paper offers two historical case studies in which numerically inferior forces conducted mobile defenses: the German Army Group Don at the Donetz River in 1943 and the Israeli Northern Command on the Golan Heights in 1973. These studies consider commanders' ability to withhold forces from the line of contact when their forces have insufficient combat power to execute an area defense.

Finally, the mobile defense doctrine presented in 1993 edition of U.S. Army Field Manual 100-5, Operations is presented along with the CAC study's conclusions and rationale which directed revision of the primary doctrine in subordinate manuals. These modern interpretations are then analyzed in the light of the historical framework provided. Conclusions address the validity of the striking force concept and the utility of a supplemental, or "true", reserve in seeking the destruction of the enemy main body in the high risk mobile defense.

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I. Introduction

Reserve, (n), 1: something stored or kept available for future use or need; 2: something reserved or set aside for a particular purpose, use or reason: as a 1) military force withheld from action for later decisive use, 2) forces not in the field but available.

*Webster's Ninth New Collegiate Dictionary*¹

The common definition and use of key terms defines the practice of professional art and science and enables the advancement of a profession. In the military profession, the search for precise terminology is well-intentioned, yet labors under the infrequent examination of the validity of terms on the field of battle. Increased emphasis on joint and combined operations has spurred the search for a common language both at the joint level, among the armed services of the United States, and at the international level through alliances such as the North Atlantic Treaty Organization (NATO). The search for a wider consensus, however, is frequently complicated by a lack of definitional consensus within the various services. One term so muddled in the Army is the meaning of the word "reserves".

While reference to reserves is nearly universal in battle studies, there is little clarity in the relationship between the ancient and classical employment of forces temporarily withheld from battle and their use as anticipated by the current U.S. Army definition. The Army definition not only excludes forces committed by contact with the enemy but also those tasked with "a specific mission or course of action which [sic] precludes [their] employment elsewhere"². This is an extrapolation from the concept of a "true reserve" in the 1982 version of FM 100-5.³ With the publication of the 1993 edition of FM 100-5, Operations, and its subsequent interpretation published by the Deputy Commanding General, Training and Doctrine Command, the fundamental purpose of the "reserve" seems to have devolved into something alien to its lineage.

In addressing the mobile defense, the 1993 manual reintroduced the term "striking force" to U.S. doctrine. Prior to publication in June 1993, there was sufficient confusion in application of the mobile defense concept to prompt a Combined Arms Command (CAC) study in May of that year. Release of a CAC White Paper on the mobile defense followed in January 1994. The White Paper was intended to "serve as an interim change [to] be implemented immediately into [TRADOC] school programs of instruction...and Combat Training Center (CTC) [After Action Reviews] AARs." The paper sought to standardize the understanding and application of existing doctrine across all levels of tactical command. The authors of the White Paper specified that, "FM 100-5 should not characterize the striking force as a large, mobile *reserve*, but as a *committed force* organized to conduct the decisive attack as part of a mobile defense".⁴ To be consistent with the definition of a committed force noted above, the striking force could not be a reserve. Therefore, the paper also recommended the composition and central control of an additional reserve force. This paper will determine whether, for successful conduct of a mobile defense, the executing commander must or can wisely constitute what might be differentiated as a "true" tactical reserve in addition to a striking force.

To resolve the issue, the paper traces the lineage of reserves and striking forces in classical and modern theories of war in order to identify their fundamental purposes. It is purpose which should define doctrinal terms, not prescriptive definition of placement, composition, and other characteristics.

Next, the paper analyzes two defensive battles conducted by numerically inferior armies with specific attention paid to their capability to withhold forces from the line of contact in anticipation of their offensive employment at a decisive time. These, then, will be compared to the current interpretation of the concepts as expressed in the CAC White Paper. This process will support conclusions about

the fundamental nature of the terms in question, the validity of the "true reserve"/ committed force concept, and the utility of a division of functions, among forces temporarily withheld from battle.

II. Theoretical Foundations

When you have it in contemplation to give battle, it is a general rule to collect all your strength and to leave none unemployed. One battalion sometimes decides the issues of the day.

Napoleon⁵

This portion of the research considers the theoretical foundations of the mobile defense, tactical reserves, and striking forces. Theoretical analysis of the mobile defense may be divided into two major blocks: examination of classical theory and discussion of modern U.S. theory and doctrine. For the purpose of this paper, the modern era comprises the period of mechanized warfare. The enhanced mobility and firepower of forces in this period have expanded the scale and scope of the battle in which particular echelons of command have been able to execute a mobile defense. The idea of mobile defense will be the first concept examined in each period. This will provide a framework for consideration of forces initially withheld from battle: tactical reserves and/or striking forces.

Mobile Defense

Clausewitz offers the most substantive consideration of the mobile defense in the classical period. In On War, Clausewitz states that the primary object of all defensive methods is preservation.⁶ He emphasizes, however, that the defense should only be employed until the defender is strong enough to pursue a positive object. The "sudden powerful transition to the offensive--the flashing sword of vengeance--is the greatest moment for the defense."⁷ Subsequently, he identifies the mobile, or active, defense as a method in which certain forces "[would] be held in reserve...coming up from the rear to stiffen passive resistance and renew it, or of attacking the enemy in flank or even threatening his retreat."⁸ At the operational

level, the method of defense moved away from the cordon and entailed the maneuver of forces to entice the enemy into a position in which he could be attacked from the flanks. Mobile forces, positioned in the center of the defense could be withdrawn to the rear as the attack was initiated, bringing the enemy onto unfamiliar terrain, and allowing concentric attack as the penetration progressed. In the earlier Principles of War, Clausewitz had presented a similar tactical method which he called "formation in depth...in which...one half or still less of the army is [forward] and the rest directly or obliquely behind and hidden".⁹ At both levels of war, the commander relied on mobile forces initially withheld or subsequently withdrawn from battle to launch a surprise counterattack to regain the initiative as the enemy reached culmination.

Tactical Reserves

In one of the few modern treatments of forces temporarily withheld from battle, Trevor Dupuy credits Clausewitz as "the first to treat the theoretical aspects of reserves extensively."¹⁰ The conceptual and practical roots of tactical reserves, however, have their foundations in ancient warfare. Vegetius addressed the employment of tactical reserves in some depth, crediting the new concept to the Lacedaemonians (Spartans).¹¹ The immense importance of the forces in question drove the Romans to vest command of the reserves with the supernumerary lieutenants of the legion. The *triarii*, or third echelon, "rested on one knee during the action", conserving strength prior to charging forward against penetrations or to exploit the gains of a forward element exhausted in battle. The purpose of the force was to "repulse or...break the army."¹²

Almost 2000 years later, Frederick the Great recognized the decisive nature of reserves and emphasized their need for mobility. He employed a cavalry reserve with the agility to respond to "any flank [where] the enemy wishes to make *his greatest effort to penetrate*.(italics added)".¹³ The cavalry was commanded

by a gifted general, positioned to see the entire battlefield. He would respond to a potentially decisive crisis, or remain out of contact until the primary engagement concluded when he would execute a pursuit of the withdrawing forces.¹⁴ To exploit the offensive capability of the cavalry reserve in the most decisive manner, it was essential to withhold this force until the enemy revealed his main effort. Positioning the reserve commander near the commander-in-chief offered the positive control necessary to rapidly transfer the senior commander's decision into action.

Frederick's primary focus was offensive employment of the reserve, but he also dealt with defensive options. He stipulated the constitution of two large reserves of infantry, designed to respond to penetrations of the defensive line. Cavalry was positioned in a third line to conduct flanking maneuvers against the attacking enemy.¹⁵ The vast difference in mobility required for offensive and defensive reactions drove Frederick to separate the functions of forces initially withheld from battle between an offensively-oriented cavalry "striking force" and an infantry "reserve" to reinforce the defensive efforts of his forward line.

Napoleon employed a variety of reserves, but there is no indication that he intended that these forces be withheld from battle other than temporarily. Napoleon sought decisive battles. Greater destruction of the opposing force produced greater strategic advantage for France. To annihilate the opposition in a single battle was Napoleon's goal. "A general who retains fresh troops for the day after a battle is almost always beaten. He should, if helpful, throw in his last man, because on the day after a complete success there are no more obstacles in front of him."¹⁶ The progressive engagement of cavalry, infantry, and artillery reserves was shaped by the senior commander's *coup d'oeil*, the ability to identify instantly the decisive time and place for the forces withheld to enter the fray.

Clausewitz discusses reserves extensively. Fundamentally, he writes, the reserve has two distinct purposes: "to prolong and renew the action [and] to counter unforeseen threats."¹⁷ In this regard, there is little variation in the purpose of the reserve since Vegetius' time. However, Clausewitz does incorporate a division of purpose between mounted and dismounted reserve forces similar to Frederick's.

On War focused on the elements of uncertainty and chance in battle. In the earlier work, Principles of War, Clausewitz recommended employment of the reserve to compensate for that uncertainty.¹⁸ He advocated the division of the reserve, placing infantry forces to reinforce the front directly behind the line of contact, while cavalry was placed "obliquely behind" to allow flanking maneuver against the attacking enemy columns. Mobile cavalry was to be employed as a counterattack force, to be committed when the enemy attack was broken or his withdrawal begun.¹⁹

Like Vegetius' Romans, Clausewitz recognized the physical and moral effects of the arrival of fresh troops as the enemy force approached exhaustion. If a penetration occurred, the enemy was forced to breach a second defensive line. If the attack stalled, the reserve counterattacked the stationary force. The reserve was fresh and fully armed. The enemy was exhausted and psychologically unprepared to continue the fight. Once the decision was reached to commit the reserve, it was to be committed with audacity to overwhelm the enemy.²⁰ In the defensive, the infantry reserve turned the tide of the battle, forcing the enemy back from the defensive line. Once the enemy's withdrawal commenced, the cavalry reserve pursued to destroy the force in detail. There was no intent to withhold these forces for the duration of combat, but merely until the decisive time. The responsibilities of forces withheld from battle were again divided between a fixing force and an attacking force based on the mobility of these assets.

Later in the nineteenth century, Ardant du Picq further emphasized the moral impact of a fresh force entering battle. duPicq believed that destructive effects and moral effects were complimentary if applied sequentially.²¹ Forward forces of a formation created destructive effects by their fires which also fractured the moral fiber of the enemy's forward elements. However, the friendly forces were subject to similar moral degradation by the enemy's fire. To compensate for this, duPicq proposed adoption of an open order, with half of all tactical units held in reserve. The other half of the force was to be deployed as skirmishers in the first line to develop the situation, fracture the moral fiber of the enemy, and cause the attacker to reveal his main effort²². The commitment of the attacker's main effort was expected to cause a portion of the enemy line to fall back, at which time, "the reserves...support and reinforce the line, *and above all, by a swift charge...cut the enemy's lines.*"²³ The commander sought to inject these fresh forces to overwhelm the enemy force as its moral resistance declined. Reserves were withheld from the initial battle with an intent to finish the engagement by their decisive action, supplanting the forward forces as their moral momentum declined. The commander selected the specific timing and axis of the reserve action as the engagement progressed. The forward line created the opportunity for such action.

DuPicq considered the potentially decisive effects of reserves critical to success and supported their maintenance at all levels of command.²⁴ For the U.S. Army, DuPicq's legacy lies in our insistence upon this maxim.

Striking Force

The term "striking force" has been used by a variety of military authors. Webster's dictionary lists twenty-four definitions of the verb, "strike". Most appropriate are "to aim and deliver a blow or thrust", "to come into contact forcefully", "to engage in battle", or "to make a military attack". The common

aspect of these definitions is the offensive nature of the blow. A striking force, therefore, is an organization tailored to conduct offensive operations.

Clausewitz and Frederick did not use the term "striking force". As noted previously, they did delineate the need for mobile, offensively capable forces to wield the "flashing sword of vengeance" during defensive operations. This was the cavalry; at that time the most mobile arm on the battlefield. Clausewitz's "special cavalry reserve [performed] three functions: 1) fall[ing] upon the retreating enemy and attack[ing] his cavalry cover, 2) pursu[ing] the enemy, and 3) execut[ing] a strategic turning movement."²⁵ He emphasized exploiting the initiative seized by the initial counterattack which would push the enemy to the culminating point. Notably, Clausewitz called this offensive force a reserve.

In the era prior to mechanization, the capabilities of striking forces were limited by the constrained mobility of men and horses. The relatively short range and lack of precision of weapons in the classical period, combined with the lack of protection for the attacking force, tended to reduce the effects of a surprise flanking maneuver. Often a formation could be observed by the intended victim before coordinate friendly forces could place accurate fires on that enemy. The rate of advance prevented rapid closure of the intervening terrain and subjected the counterattack force to aimed, defensive fire.

In the 1920s, J.F.C. Fuller and Basil Liddell-Hart began to analyze the new capabilities that mechanization could bring to the battlefield. In the Soviet Union, Tukhachevskiy, Svechin and others considered the potential that mechanized forces offered for deep (operational) maneuver. The combination of mobility, firepower, and protection possessed by armored forces, coupled with the indirect approach, inspired the military thinkers of Nazi Germany. At the dawn of World War II, Heinz Guderian fathered a hybrid of these concepts that employed a highly mobile,

offensively capable organization to spearhead penetrations into the depth of the enemy formation. The German Army would call this a striking force.²⁶

Guderian's vision of the German striking force was a hybrid of maneuver theory. In the original German of Panzer Leader, Guderian credits the Soviets for the foundations of his thinking. In the revised English version, published after World War II, Guderian apparently sought to gain greater acceptance of his theoretical work by crediting Fuller and Liddell-Hart's views on the indirect approach.²⁷

Guderian cited Kryshanovsky's words: "A decisive success is attainable only through the simultaneous destruction of the main enemy deployment to its entire depth, in both tactical and operational dimensions. This demands the action of strong, fast-moving forces which possess great *striking power* and mobility'.²⁸ Guderian defined *striking power* as "*the power that enables combatants to get close enough to destroy the enemy with their weapons...to have true offensive capacity...*"²⁹ The emphasis on physical destruction differentiates Guderian's work from that of Liddell-Hart, for whom the indirect approach sought paralysis of the enemy through deep operations. For Guderian, paralysis enabled more complete physical destruction of the enemy force.³⁰ This interpretation is consistent with the desired end state of the striking force counterattack in U.S. doctrine: the elimination of the enemy's offensive capability in the area of operations.

Guderian's concept was offensively oriented to enable deep operations. It was prescriptive about the role and operations of the striking force. The striking force led breakthrough forces through the point of penetration. There were, according to Guderian, three prerequisites to a successful armored assault: "suitable terrain, surprise, and the concentration of all available forces at the decisive point."³¹ Guderian prescribed four lines of battle with unique objectives.

The first line pinned down enemy reserves, knocked out command and control centers and eliminated anti-armored threats en route to these objectives. The second targeted enemy artillery and anti-tank assets supporting them. The third line was heavily weighted with mechanized/ motorized infantry to clear infantry forces in zone. A fourth line was composed "only if [the friendly force] has a considerable number of tanks". It was the striking force commander's reserve to roll up "intact sectors of the front".

We must now analyze the adaptation of this concept in modern U.S. doctrine.

Modern U.S. Foundations

The only way to prevent this ossification of mind is to accept nothing as fixed, to realize that the circumstances of war are ever changing, and that, consequently, organization, administration, strategy, and tactics must change also; and if during peacetime we cannot change them in fact, we can nevertheless change them in theory, and so be mentally prepared when circumstances require that changes be made.

J.F.C. Fuller

Armoured Warfare³²

The research to this point has explored the theoretical basis for tactical concepts which are central to the mobile defense doctrine prescribed in the 1993 FM 100-5. The doctrine stipulates that, "Mobile defense orients on the destruction of the enemy force by employing a combination of fire and maneuver, offense, defense, and delay to defeat his attack...[placing] maximum combat power in a striking force that catches the enemy as it is attempting to overcome that part of the force dedicated to the defense."³³

The first half of the twentieth century brought vast technological change to the battlefield. The development of smokeless powder, rifled arms, the combustion engine, armored protection of vehicles, and aircraft progressed at a rate faster than armies could integrate the technologies into sound practice. Changes in tactics did

occur, albeit more slowly. Tactical formations dispersed on an increasingly lethal battlefield controlled by more precise weaponry. Air power increased the threat of detection and extended engagement of forces to the rear of the line of contact. The combustion engine and armored combat vehicles increased the closure rate and protection of attacking forces. Reliable communications systems enhanced the agility of forces by providing a direct linkage between decision makers and maneuver formations. Uncertainty remained, for the enemy's intentions could be concealed or misinterpreted and friendly force execution could fall short of the theoretical expectations. Armies continued to withhold forces from their initial encounters.

Mobile Defense

In all the versions of FM 100-5 but the 1976 edition, two defensive methods are presented: area/position and mobile. Why is one preferred? Only the 1954 edition hints at the answer: the mobile defense is employed when combat power is insufficient for a successful area defense and/or the need for decisive victory justifies accepting significant risk.

The fundamental difference between the methods of defense is found in the focus of the commander. The alternatives are strict retention of terrain (area defense) or the strict destruction of the attacking force (mobile defense). While an area defense destroys elements of the enemy, the commander applies his combat power against the leading echelons of the attacker to deny the enemy possession of a portion of the battlefield.³⁴ The attacker may break contact from a determined defense and retain a significant portion of his combat power for subsequent efforts to secure the prescribed objective.

A mobile defense seeks the destruction of the enemy main body, initially by desynchronizing his attack and maneuvering to isolate the formation, then by destroying it in detail. William Lind emphasizes that maneuver concepts in the

defense use the enemy's own momentum against him.³⁵ The friendly counterattack forces the enemy commander into a reactive position while he is committed to a particular action. The counterattack must be sufficiently violent to force the enemy commander to take three actions: first to control his forward momentum, then to maintain the coherence of his deployment, finally to redirect efforts against the new threat. To leverage combat power in a mobile defense the forward defensive elements attrit, disperse, and fatigue the attacker. Then the offensive force exploits the advantages of surprise through concentric or flanking blows.³⁶

Mobile defenses must present sufficiently credible forward defenses to shape the enemy action, to force him to concentrate, but then allow a penetration that exposes the depth of his formation to attack. The defender withholds forces from the forward defensive battle and positions them to engage decisively the exposed enemy flank or rear. An aggressive, high tempo counterattack forces the enemy to react to the friendly battle tempo. The surprise attack generates what could be called a "decision-to-execution gap" that initially desynchronizes the enemy's operating systems. Maintaining that tempo expands the gap over time allowing the piecemeal destruction of *operating systems*.

In the late 1950's, the dispersion and depth of the Pentomic battle group provided a structure ideally suited to execution of the mobile defense. The defense consisted of a "forward defensive area...occupied by minimum forces necessary to warn of impending attack, [to] canalize the enemy in less favorable terrain, and block or impede the attacking forces while the bulk of the defending force is employed in offensive action to destroy the enemy at the time and place most favorable to the defender."³⁷ The method was favored under the following conditions: the mission permitted depth, terrain facilitated the defender's maneuver, the defender had superior mobility, the air situation permitted free movement of defending forces, time was not available to organize a position

defense, the enemy could employ weapons of mass destruction, and reserves at higher echelons were limited.³⁸ The contemporary manual allowed for "selection" of the mobile defense, but the lack of time, limited higher reserves, and the potential for weapons of mass destruction imply its adoption as a matter of necessity. The only condition which prohibited its use was a mission that precluded trading space for time.

The more robust force structure and technical capabilities of the 1960s mechanized divisions increased the capacity of smaller units to conduct a mobile defense. A division could defend a frontage of 20,000 meters; two battalions could defend an area about equal to that of a WWII division.³⁹ Technical advances that extended weapons system ranges and effects, improved intelligence systems, and made C2 systems more responsive and flexible, made organizations more agile and lethal. Enhanced mobility reduced the closure rate of reserves from assembly areas to the line of contact. Fuller's process of concentration was compressed.⁴⁰ The doctrine of the period maintained the previous conceptual construct for the mobile defense but changed the terms designating the forces withheld from contact.

The 1976 version of FM 100-5 is the only manual in 50 years that does not refer to "mobile defense". Constrained by the political realities of NATO, the mission denied depth to tactical commanders. All maneuver forces were to be deployed in the covering force or the main battle area. Ironically, the same force structure enhancements that lent viability to the mobile defense, justified the forward array...mobility allowed rapid lateral repositioning of units.⁴¹

This assumption is a principle point of inquiry for this study. With enhanced mobility, and refined battle command linkages, we may possess sufficient agility and battlefield mobility to reduce the need for centrally located forces withheld from initial battle. Further, when opposing a highly mobile enemy, a

centrally positioned ground force may not provide the desired freedom of action to influence decision.

Tactical Reserves

S.L.A. Marshall summarized the role of reserves on the modern battlefield.

A reserve is always a tactical base of operations, a fulcrum to work from, a chief tool in the hands of the commander...In the offensive its chief value is not that it comprises a reservoir of strength against unexpected pressure, but that bereft of it, the commander has no general insurance against stagnation in his own action. It is the habit of a strong commander to withhold his reserve until it is clear beyond doubt that the assault force has lost momentum at the vital point, and then employ it either as a relief or as reinforcement to give fresh impetus to the advance.⁴²

This synopsis emphasized the role of the reserve in the offensive to sustain the momentum of the attack. Marshall implied the eventual commitment of the forces initially withheld from battle based upon the commander's recognition that an attack is losing momentum. By constituting a central reserve, the senior commander retained direct control of a responsive force to influence the battle in times of crisis or to sustain offensive action leading to decision. The reserve's massed entry into combat consumed the commander's last means of ground force influence. This acknowledged a risk inherent in the commitment decision as another valid requirement for employment of the reserve could arise.

The United States began World War II with the 1941 version of FM 100-5 which stated: "the reserves and the fires of supporting arms are the principal means available to the commander for shaping the course of action and for enforcing a favorable decision."⁴³ Clarity of the enemy situation was the commander's overriding concern in determining size of the reserve. A large reserve, "the bulk of the command, centrally located", was established if uncertainty was high. The doctrine prescribed the reserve's primary mission as "enter[ing] the action *offensively* at the proper place and moment to clinch the

victory." In the defense, three principal tasks were prescribed: protection of the exposed flank, counterattack, or launching a counteroffensive.⁴⁴ Determining when to commit the reserve was "the commander's most difficult and important decision" and, once made, required that "every man that can be used to advantage must participate in the battle..."⁴⁵

The doctrine emphasized one half of the reserve's dual purpose: to act decisively through offensive action. Combat was a means to gain decision. Unutilized combat power suboptimized the potential for decision and allowed the enemy to retain a larger portion of his existing force as a basis for reconstitution. This is consistent with Napoleon's maxim and demonstrates the enduring nature of the offensive purpose of the reserve in classical theory.

On the mobile, armored battlefield, the primary risk for defending or attacking forces was flank attack. The doctrine, therefore, was prescriptive in the positioning of the reserve to respond to developing threats to an exposed flank. This secondary emphasis for the employment of reserves included their conduct of local security actions to provide early warning on the flank. While maintaining readiness for offensive action, the reserve was not intended to "sit and do nothing".

Army force structure and doctrine changed in response to the threat of a nuclear battlefield. Greater dispersion of forces was required to minimize the potential for destruction of massed units by a single nuclear detonation. This dispersion created greater uncertainty for the commander and increased the emphasis placed on the role of reserves in reacting to that uncertainty. This diminished the focus of the 1954 FM 100-5 regarding the priorities for action by the reserve. It prescribed a variety of tasks for a reserve: counterattack, blocking penetrations, extending the flanks of battle positions, occupation of rear positions, reinforcement/replacement first line units, dealing with guerillas or infiltrators, and covering retrograde movements. The doctrine failed to recognize the planning

limitations of the reserve staff by directing that plans propose "employment of reserves against all major foreseeable contingencies".⁴⁶ The dispersion of forces in disparate battle positions and the wide array of contingencies favored a centrally-controlled, highly mobile reserve that could close large distances rapidly in response to the commander's needs.

Finally, the doctrine was prescriptive about the necessity for a reserve. It directed that, "a reserve *must* be constituted and, upon its commitment, a new one designated at the earliest opportunity."⁴⁷ Coupled with the wide array of tasks prescribed, this emphasized the role of the reserve in reacting to uncertainty rather than exploiting opportunities for decisive offensive action. This negative focus could be attributed to the belief that truly decisive effects would be achieved by the employment of nuclear fires. The decisive role of the reserve devolved as a result of an inaccurate forecast of the nature of future war.

The 1962 doctrine was, in many ways, a reaction to dissatisfaction with the Pentomic concepts, a foreshadowing of a similar reaction to the 1976 doctrine of Active Defense in 1982. Reserves in defensive action were to be, "the primary means by which a defender regains the initiative. Retention of a relatively large reserve, consistent with the requirement for forces in other echelons, permits offensive action both within and forward of the battle area...Where the mobile defense is employed, the reserve is the largest and most decisive element of the force...its primary mission is to defeat the enemy by offensive combat."⁴⁸ The verbiage for the mobile defense was little changed from 1954 except for the substitution of the term "reserve" for the distinctly Pentomic term: "striking force".

The 1976 FM 100-5, lacked reference to reserves. It was focused on actions at battalion and below. It specified that the retention of reserves rear of the FEBA was not possible, given the need to create the massed fires required to defeat an enemy with an 8:1 combat power ratio. It adopted a defensive technique

of lateral repositioning from the Israeli experience of the Yom Kippur War. The Israelis were forced to move committed forces from less threatened sectors to concentrate against the enemy's main effort. The 1976 manual recognized an active, thinking enemy and the role of uncertainty in assessing the opposing course of action, but it compensated for this by pushing forces forward. The doctrine's European focus recognized that political considerations prohibited the operational depth necessary to conduct a mobile defense.

The absence of the reserve was but one of the distasteful features of the Active Defense for the authors of the new FM 100-5 published in August 1982. Commanders found lateral repositioning of forces unlikely in the presence of an echeloned, mobile attacker seeking to achieve normative gains. The more descriptive tone of the 1982 Airland Battle doctrine reflected that of its 1941 predecessor. The reserve's strength and composition were to be functions of the command estimate. Its principal mission: "[to be] the commander's principal means of influencing the action decisively once the operation is underway...reinforc[ing] success in the attack or maintain[ing] attack momentum." The reserve again became a formation of decision.

The 1982 doctrine serves as a dividing line for definition of reserves. It introduced the concept of a "true reserve" which "has no objective prior to its commitment."⁴⁹ Its main purpose was to force commanders to differentiate forces withheld from the line of contact from forward forces that were laterally repositioned in the Active Defense. Yet, in so doing, it established the basis of our current definition of reserves, differentiating them from "initially uncommitted forces with subsequent missions." The distinction ignores the brevity of the transition of "be prepared missions" to "on order missions" shown by history.

Commanders seeking decision have always intended to commit the reserve for decisive offensive action. They have held the specific direction of the action in

abeyance until situational development provided a vision for the most decisive use of the force. The "true reserve" concept has created a school of thought advocating that a reserve should be withheld from action unless it is needed.⁵⁰ This interpretation is inconsistent with classical theory. A reserve not generating decision, performs only half its traditional purpose, as a hedge against uncertainty.

The "true reserve" concept was further complicated because the 1982 manual questioned the need for reserves at battalion level and below. For these forces, "counterattacks [were] conducted by the least committed elements".⁵¹ This implied that only tactical commanders at brigade level and above retained a force that could plan for contingency operations of an offensive nature and deprived subordinate commanders of the flexibility to respond to local uncertainty.

The doctrine also exalted the reserve by listing it as a separate component of the Defensive Framework's five components: Deep Battle, Covering Force Area, Main Battle Area, Rear, and Reserve.⁵² The 1986 version of FM 100-5 modified its terms to address Deep, Close, Security, and Rear battles, but retained the reserve. Retained again in the 1993 doctrine, the framework has great utility for the construction of a cohesive concept of operations. However, the inclusion of the reserve is inconsistent with the model. Four components of the framework are functions of the battle; one is a participant. The model should have identified competing requirements on the battlefield and established priorities of effort. The reserve, like any other combat power asset, has potential taskings in all components. Its priorities are a product of the command estimate. Why then is it distinct?

This chapter began with a discussion of the mobile defense concept presented by the 1993 FM 100-5. The interchangeable use of the terms "striking force" and "large, mobile reserve" implies that the authors did not see a need to distinguish between the functions of two separate forces based on their "committed"

status. Burdened by the baggage of commitment, born in the 1982 doctrine, the CAC Study Team found such an intent to be misguided. They drew the questionable conclusion that two distinct forces should be constituted and thus subtracted not just from the elements deployed forward, but from each other. The validity of this conclusion will be discussed in Chapter 4.

We conclude this section, then, questioning the utility of the "true reserve" concept and move on to its corresponding correlative, the "striking force".

Striking Force

(F)reedom of action is not all the commander needs. He also needs an instrument capable of achieving decision...an agile force capable of synchronizing friendly action, while desynchronizing the enemy...[It] will be capable of seizing the initiative and establishing the conditions for victory.⁵³

For many, the striking force was a new doctrinal term when it appeared in 1993. It is actually a reincarnation of a Pentomic Era spin on a classic defense concept. The defeat mechanism in the mobile defense was known as the Striking Force. General (Ret) Richard Cavazos used the term in the current discussion, referring to the previously mentioned World War II German striking force.⁵⁴ It seems that both the 1954 and current usage are drawn from the German concept.

The crucial difference between Guderian's vision and the US concept is that Guderian's striking force executed a deliberate attack in the enemy's operational depth. Reconnaissance identified the locations of the forces to be targeted. Task organization was based on reconnaissance reports of the defender's dispositions in depth⁵⁵. The great similarity is the emphasis on targeting operating systems capable of influencing the breakthrough. By synchronous destruction of command centers, higher reserves, and fire support systems, the striking force denied the enemy the ability to synchronize combat power.

In 1954, the balance of the sector behind the forward defensive area was called the striking force area. The striking force was to be highly mobile, strong in

armor, and supported by tactical attack aircraft which could provide flexible and responsive augmenting fires at the point of decision. Far from "doing nothing on the battlefield", the striking force "provide[d] small, mobile, security and reconnaissance forces in its area."⁵⁶ This parallels the 1941 responsibility of reserves for security and reconnaissance on an exposed flank, acknowledging that a large force could perform multiple tasks within the scope of its mission.

In 1962, FM 100-5 deleted reference to the Striking Force, substituting the following verbiage: "the bulk of the defensive force is employed in vigorous offensive action to destroy the enemy at a decisive time and place." It continues to say that "the reserve is the largest and most decisive element of the force...[which] may be required to perform defensive actions".⁵⁷ The doctrine recognized the primacy of offensive action, but allowed for defensive action to respond to unexpected enemy action.

The term "striking force" did not reappear in U.S. doctrine until June 1993.

History seems circular. In ten years, a specific term for an offensively oriented force initially withheld from battle was created and eliminated in favor of the more traditional "reserve". The purpose of the "large, mobile reserve" was identical to that of the striking force. Though offensively oriented, doctrine consistently recognized that unexpected enemy action generating intolerable risk levels could compel the commander to employ the force defensively. In the 1993 FM 100-5, the terms "large, mobile reserve" and "striking force" were used interchangeably in the discussion of the mobile defense. The CAC White Paper, released by the Deputy Commanding General of TRADOC in January 1994, specifies that "large, mobile reserve" will be replaced by "Striking Force" in all future publications.

The circular evolution of the terms striking force and reserve is based on competing notions of the intent for eventual employment of forces initially withheld

from battle. The presiding school of thought, in current doctrine, insists that a force with a unitary, defined purpose is committed and cannot be a reserve. The minority opinion holds that all combat forces are intended for eventual employment in battle to maximize the fighting potential of the parent organization. The minority members accept that uncertainty is always present in battle, but is reduced over time by the actions of the enemy. Forces are withheld from initial defensive engagements to be strike a blow when time and space have limited the attacker's flexibility to alter his course of action. These forces fall under the general heading of "reserves".

III. Historical Analysis

Having established the theoretical foundations of the mobile defense, the striking force and tactical reserves, we must analyze the application of these concepts in battle. Few battles demonstrate a commander's intent to execute the high risk mobile defense. Fewer involve formations below the Army or Army Group level.

Two case studies follow. The first is not a mobile defense by the White Paper definition, but demonstrates relevant characteristics for consideration. The Israeli Defense Force (IDF) battle on the Golan Heights in 1973 allows consideration of the Army's ability to conduct a mobile defense during the early stages of force projection. The case offers relevant data regarding the development of combat power and the willingness of political representatives to accept the level of risk to national interests associated with a true mobile defense.

The second battle study considers the German Army Group Don in the Battle of the Donetz from December 1942 to March 1943. This is perhaps the model of the mobile defense in modern warfare. Manstein faced a desperate situation against a numerically superior foe. He overcame opposition from the strategic level, initially executed a fluid area defensive battle which allowed the creation and concentration of a striking force. This force subsequently destroyed

the enemy's mass of maneuver and recaptured the initiative. Liddell-Hart described the counterstroke as "the most brilliant operational performance of Manstein's career, and one of the most masterly in the course of military history."⁵⁸

Golan Heights, October 1973

The operations of the Israeli Defense Force (IDF) in the 1973 Arab-Israeli War were the historical model that spawned the Active Defense doctrine of 1976. The absence of tactical reserves in that doctrine and its emphasis on forward concentration of forces to achieve acceptable combat ratios at the line of contact appears to exclude this campaign from a study of mobile defense. Why then is an area defense presented as a component of research on the employment of reserves in a mobile defense? Principally, the research is concerned with the benefits the senior commander in a mobile defense gains by composing a "true" reserve relative to the cost in capabilities of the forward defensive units.

The Golan campaign illustrates three core issues: the impact of considerations of strategic risk on the flexibility of tactical commanders, the tactical limitations which mobilization imposes on a force in reactive contingencies, and the capability to improvise a mobile defense from an area defense.

The strategic level of war sets conditions for the employment of military power. Prior to 1967, the Israeli strategic situation precluded considerations of depth in defensive operations. Seizure of the Sinai peninsula allowed depth in maneuver operations against Egypt. The Golan heights, only 40 miles from the Mediterranean Sea, offered positional defensive advantages against Syrian with no defensive depth. Facing a numerically superior Arab coalition, the IDF was forced to shift forces between theaters if attacked on two fronts. The national strategy was: win (Golan), hold (Sinai), win (Sinai).

Israeli military operations relied heavily on rapid mobilization of reserves. Eighty percent of the ground forces of the IDF were in the Reserve Component. As the war progressed, 275,000 reserves were mobilized.⁵⁹ In a "no warning attack", this exacerbated the problems of numerical inferiority against the initial assault. Israeli mobilization plans called for the direct entry of reserve formations into the Main Battle Area within 3 days. Each of the three standing *ugdat* [divisions] had a reserve brigade permanently assigned. The ratio of forces to space thus denied Israeli commanders the ability to withhold a tactical reserve in the initial battle. To mobilize sufficient combat power to mount offensive operations, the forward deployed units had to hold the post-1967 Syrian border, referred to as the Purple Line.

Mobilization drove the operational employment of forces. In most cases, reserve brigades were ready for deployment in less than 24 hours.⁶⁰ IDF ground forces could respond to any national border in one or two days. As brigades assembled, operational commanders identified the most threatened sector, designated that as the main effort and fed reserves directly into that area.

Israeli doctrine recognized the importance of the linkage of tactical command to the operational and strategic levels and adopted a method of "optional control" as a suitable method of command. The Israeli's felt that the tempo of modern maneuver warfare and the constraints of available communication systems required decentralization to achieve success.⁶¹ Optional control allowed subordinate commanders extensive freedom of action in pursuit of their objectives while senior commanders had the option to redirect the actions of subordinate commands which were inconsistent with their intent. The system also stressed the importance of accurate tactical reporting to provide strategic situational awareness necessary for the allocation of mobilized reserves to critical sectors.

The Israeli defense plan positioned one brigade forward on the Golan Heights. Despite indicators that Arab military action was imminent, the intelligence service doubted the possibility of attack. In the week prior to the attack, Moshe Dayan, the Minister of Defense, drew his own conclusions and increased the Golan force from one brigade to two (188 tanks up from 70). At 0900, 6 October, four *ugdat* were mobilized: one each for the Sinai and the Golan; two for counterattack. The mobilization did not effect the first battle just five hours later.⁶² The Syrians attacked with 800 tanks and 150 field artillery batteries in the first line⁶³.

The Syrians planned to create a deep, initial penetration with three mechanized infantry divisions in the first echelon to seize one-half of the Golan heights and prevent the arrival of reserve formations⁶⁴. Two second echelon armor divisions were to exploit these gains to consolidate on the Heights with successive movements to cross into Israel proper.

Northern Command's initial intent was to conduct an area defense across the Golan Heights. Necessity forced adoption of maneuver tactics. Syrian forces penetrated the 188th Brigade in the southern Golan and made that sector the main effort in Northern Command. To their north, 7th Armor Brigade fought an area defense against forces with greater than 5:1 numerical superiority.⁶⁵ Operationally, Northern Command's counter-offensive demonstrated many of the characteristics of a mobile defense.

The second brigade directed to the Heights was the 7th Armored Brigade from Beersheba. During mobilization, LTC Avigdor Kahalani's battalion was designated as the brigade reserve. To maintain his freedom of action as a counterattack force, Kahalani designated his own reserve; a company(-) of 7 tanks. Incomplete mobilization eliminated the possibility of *ugdah* reserves. When

reserve forces ultimately did become available, 188 Brigade received the lion's share as well as the preponderance of close air support.⁶⁶

The Syrian attack at began at 1400, 6 Oct. Kahalani was immediately ordered to detach one company to a sister battalion , a second company to brigade control and to move the remainder of his battalion from its assembly area to Queneitra; a central crossroads on the main enemy axis. Upon occupation of prepared defensive positions, he was immediately engaging targets. The duration of his "uncommitted status" was less than 6 hours.⁶⁷ His unit's designation as a reserve allowed the brigade commander time to establish the axis of advance of the enemy force. Commitment to the line of contact was "on order"; the location of the commitment in question. The following three days demonstrate a similar pattern of brief designation of reserves rapidly recommitted to the battle. Faced with dominating enemy force ratios, the brigade commander's greatest risk was to fail to maximize firepower at the line of contact to deny enemy penetration of the Purple Line. He accepted reduced freedom of action to generate necessary combat power forward.

The brigade's continued designation of reserves leads to two conclusions. First, there is utility in designating a maneuver reserve in an area defense. The senior commander identifies a force with known combat power and, thereby, can make quick estimates of its potential impact on a potentially decisive engagement. The reserve commander can gain situational awareness by tracking the battle on the higher command net, visualizing potential orders and formulating courses of action in the absence of an ongoing close battle. The second conclusion is that the "uncommitted status" of a reserve is a relative issue. The senior commander designates a reserve with the intention of utilizing it based on the developing situation. He calculates risk considering mission, available space for the defense, relative force ratios, and the uncertainty of the enemy action. He employs the

reserve at a time when risk levels become intolerable. Then he seeks to reconstitute another reserve.

Northern Command's mobile defense began to take shape on 7 October, when the Syrian main effort nearly broke through in 188 Brigade sector.⁶⁸ The Syrian 5th and 9th Mechanized Divisions created a penetration on the Tapline Road, nearly achieving the Jordan River by midnight. The effective, although belated, mobilization of reserve forces, allowed the IDF to concentrate three *ugdat* on the Golan Heights. BG Rafael Eitan's division reinforced the 7th Brigade sector, holding the northern shoulder of the penetration, while MG Dan Laner's and MG Moshe Peled's divisions were directed south. Laner secured positions north and east of the Sea of Galilee, allowing Peled's division to occupy attack positions to their rear. Counterattacks against the Syrian 9th Division and the 1st Armored Division began on the night of 7 October. The Syrian focus was Laner's forces to their front, exposing the 1st Armored Division flank to attack by Peled from the south. Peled's attack axis crossed two of the three 1st Armored Division axes of advance. Colonel Jehani, commander of Syrian 1st Armored Division, feared envelopment and abandoned his attack, directing his efforts to breakout to the east. Peled's continued attack with his center allowed maneuver of his eastern brigade to close the Hushniya pocket. The Syrians committed the supporting attack's 3d Armored Division to assist the breakout.

1st Armored Division surrendered the initiative when the tactical commander's focus shifted to the rear. When forces from the supporting attack were directed toward the salvation of the force in the Hushniya pocket, the operational commander demonstrated the inability to resynchronize his combat power. He lost flexibility as Peled's thrust threatened encirclement. When Peled's flank attack stalled, Northern Command maintained the initiative by directing Laner's *ugdah* to renew it's attack from the west. Force destruction became their

objective. Ultimately, two brigades of the 1st Armored Division were destroyed, completing the elimination of the Syrian offensive threat.

In the Golan operation, the IDF was initially oriented on the retention of terrain. Limited depth in the Northern Command sector denied the flexibility to trade space for time. The success of the initial enemy attack forced the adoption of a counteroffensive action which employed a fixing force and a large, mobile force significantly enhanced by assignment of the majority of available close air support. The operation destroyed two-thirds of the combat power of the main offensive threat, gained the local initiative and caused coalition operations to become solely reactive to the IDF.⁶⁹

Now BG Frank Akers drew the following lesson from the Yom Kippur War: "The classic time of battles held by a corps or army has been replaced by the notion of an integrated unit called a combat team. The incredible mobility afforded these units...requires greater responsibility and flexibility at *lower command echelons* [ital added] than was ever seen in relatively static, centrally controlled warfare."⁷⁰ Accepting the need for commitment of reserves to the line of contact, positioning authority was granted to the most forward commander capable of influencing the action. Senior commanders influenced the outcome of battles by identifying decisive points in the developing situation and directing forces initially withheld from battle at a time and to a place of great utility. This offered front line commanders the combat power to gain the decision desired.

Battle of the Donetz

Anyone who is not prepared to take such risks will never achieve decision and--as was essential in this case--speedy results.

Erich von Manstein⁷¹

As a preface to discussion of the Battle of Donetz, we must consider the scale of both the forces involved and the area of operations. The Don Army Group

was an operational command. It received attachment of forces from Army Group A in January and February, placing the equivalent of 4 1/2 armies comprising 32 divisions under their command.⁷² Don Group opposed over 10 Soviet Armies which possessed an 8:1 force ratio advantage. Despite the extended weapons ranges, enhanced intelligence system capabilities, and improved battle command linkages of the modern American Corps, the scope of the operation appears to exceed current capabilities. Nevertheless, this operation provides valuable lessons for a Corps serving as an operational or tactical headquarters. The Combined Arms Command study group considered this battle in the preparation of their White Paper on the Mobile Defense.⁷³

The Battle of the Donetz followed the Soviet encirclement of the German Sixth Army in Stalingrad that resulted in the loss of 20 division equivalents.⁷⁴ The encirclement of the 6th Army was devastating psychologically and materially for Hitler and his army. Forced on the defensive by the strong Soviet offensive, Manstein's weakened forces were unable to support the breakout of 6th Army and assumed a static defensive posture to the west of the Don-Donetz River bend (Map D). Their task was now to "bring defeat underfoot".⁷⁵

Manstein's defense had strategic importance to the Third Reich. The Don Army Group was positioned on the southern flank of Army Group B (later Army Group Center) and the northern flank of Army Group A, operating in the Caucasus. The lines of communication (LOC) for both army groups ran through the Group Don sector. Group A's LOC ran through the crossing sites over the Don and Manych Rivers where they emptied into the Sea of Azov at Rostov. The Soviet offensive threatened to drive a wedge on the boundary between Group A and Group Don, isolating the force from the bulk of the German Army. Group B's LOC ran through the river crossings at Dnepropetrovsk and Zaporozhye in the center of the sector.

OKH tasked Manstein to retain these key sustainment centers at all costs. These cities became the bait to draw the Soviet forces into a mobile defense.

Manstein's high-risk vision was in conflict with that of the high command. Hitler was unable to grasp the reality of his strategic impotence and insisted on retention of the resource-rich Caucasus and the coal beds of the Donetz basin. He was unwilling to trade space for time; necessary to conduct the mobile defense. After the loss of Stalingrad, he saw the retention of Kharkov as a necessary symbolic stand against the Soviets.

Manstein was defending 435 miles of frontage with 32 divisions; "there were no reserves worth speaking of behind the fronts".⁷⁶ He reacted to developing threats by repositioning less committed, mobile forces laterally. To regain the initiative, he needed to economize forces at the line of contact, receive forces from Army Group A, and reposition these forces to create a striking force in the depth of the sector. Certain that the Soviets would target the rail and road crossings at the Dnieper, he would position the striking force to attack the flanks of the penetrating force and destroy it. By desynchronizing the Soviet offensive, the mobile defense would restore the initiative to the German forces, allow the recapture of Kharkov and consolidation of defensible lines along the Donetz. Manstein's statement that "before we could take over, Kharkov was due to be lost",⁷⁷ demonstrates his recognition of the limited value of terrain. The enemy force was his target.

Manstein began the campaign with inadequate forces to execute anything but a holding action. Don Army Group consisted of Army Detachment Hollidt⁷⁸ and 4th Panzer Army. 1st Panzer Army was under the control of Army Group A to secure their LOCs and rear. This raises the first issue regarding the mobile defense: there are limitations to the leverage provided by surprise and the indirect approach. A commander also requires sufficient force to form a strong mass of maneuver. Manstein possessed only a fixing force. He gained sufficient combat

power to constitute a striking force by receiving the following attachments: Fretter-Pico Group and the SS Viking Division from Army Group B in mid-January, 1st Panzer Army from Army Group A on 27 January, and Army Detachment Lang (became Kempf after Lang was relieved following abandonment of Kharkov) from Army Group B on 13 February.⁷⁹

Prior to these changes, Manstein executed a delay from the Don to Donetsk River with three tasks: 1) fight for time, 2) protect the rear and LOCs of Army Group A, and 3) delay the enemy's advance north of the Lower Don⁸⁰. This last task was assigned to Army Detachment Hollidt in an economy of force role opposing three Russian armies at the Tzymbia River.⁸¹ Success in these missions enabled repositioning of forces for the upcoming fight. Detachment Hollidt held a 125 mile front with four infantry divisions and the 7th Panzer Division as a counterattack force .

Current doctrine seeks to remove forces from commitment well in advance of their intended offensive employment. Manstein's operations demonstrate that the enemy's actions may preclude this option. Despite attempts to consolidate the striking force in early January, Soviet pressure and Hitler's directives prevented it. Hitler directed 7 Panzer Division, initially slated to cooperate with 4 Panzer Army, to maintain the crossing points at Rostov. In January, 4th Panzer Army, the main body of the striking force, was engaged in counterattacks around against the 2d and 3d Soviet Armies threatening Rostov. When Manstein first attempted to shorten his line, the enemy crossed the Don in two places, forcing an immediate counterattack at Tatsinskaya.⁸²

On 18 January, OKH authorized "freedom of movement for 4 Panzer Division", but the attack of four Soviet corps toward Rostov again delayed repositioning. By the end of January, Soviet pressure was bursting the German lines and threatening Zaporozhye. A gap was rapidly developing on the northern

boundary between Army Group B's detachment Lang and 1 Pz Army as five soviet Corps crossed the Donetz east of Voroshilovgrad on 2 February. Manstein's vision of the enemy intent was confirmed. He ordered 4 Pz Army to move west on 7 February. To secure the movement, 1 Pz Army was directed to push the enemy forces back across the Middle Donetz and turn their penetration north toward the gap. The speed of the enemy penetration required diversion of the Viking Division to slow their progress at Grishino as the striking force continued their 100 mile move by road and rail.⁸³

On 12 February, Manstein moved his headquarters to Zaporozhye for the decisive battle. The transfer of command of Army Detachment Lang, with the newly formed SS Panzer Corps occupying Kharkov, to Manstein, provided central command of forces on both sides of the penetration. The OKH had directed the SS Panzer Corps to retain Kharkov "at all costs". Under heavy pressure, the Corps was forced to abandon the city. Hitler visited Zaporozhye on 17 February and authorized shortening the defensive line in the east to the Mius River and the withdrawal of Detachment Lang, now under Kempf, to the west. The scene was set for the counterstroke.

On 21 February, 4 Pz Army comprising five Panzer divisions of the 48th and 57th Panzer Corps, initiated their counterstroke into the gap on an axis over 80 miles long and 50 miles wide. In the gap east of Zaporozhye, the striking force destroyed two armored corps, one infantry corps, and a cavalry corps. They continued their advance in cooperation with 1st Pz Army to defeat the 6th Army, Popov Group, and the 1st Guards Army, remnants of which were able to withdraw across the frozen surface of the Donetz to preclude total annihilation. On 2 March, the equivalent of four Soviet corps had been destroyed, three corps defeated and withdrawn, and four additional corps withdrawn with heavy casualties. 23,000 Soviet soldiers died, 9,000 were taken prisoner, and equipment losses were great:

615 tanks, over 354 artillery pieces and 69 anti-aircraft guns.⁸⁴ On 14 March, Kharkov was retaken. The offensive enabled Manstein to straighten his lines along the Donetz and set the scene for Operation Zitadelle, the battle of Kursk.

Manstein credited his success to two factors: 1) conducting operations elastically and resourcefully, and 2) allowing the "initiative and self-sufficiency of commanders at all levels".⁸⁵ von Mellenthin, chief of staff of 4 Pz Army, echoed this and added the criticality of surprise and the forward presence of striking force commanders in exploiting opportunities in the developing, fluid situation.⁸⁶ These comments reinforce the necessity of decentralized execution of the mobile defense. The senior commander's vision frames the concept of operations and his situational awareness initiates the striking force offensive. Having chosen to economize forces at the line of contact, the commander must provide forces not required for the striking force in a manner most responsive to the needs of the shaping forces. Centrally controlled and positioned reserves do not seem to answer this need.

IV. Current Doctrine and Its Presentation **Doctrinal Intent**

[T]hinking in functions will help us maintain the necessary mental flexibility to understand how to accommodate change. We cannot allow our minds to become rigid by thinking in terms of separate arms.

J.F.C. Fuller⁸⁷

U.S. Army doctrine for the mobile defense is presented in the 1993 version of FM 100-5. Inconsistent application of the doctrine in Battle Command Training Program simulations generated a CAC study of mobile defense doctrine. The study culminated with the release of a White Paper which directed incorporation of interim changes to the principal doctrine in subordinate tactical doctrine and TRADOC Programs of Instruction. While certain fundamental concepts are consistent with the manual, the portrayal of the striking force and the reserve are

notably different. This portion of the research considers the variance in this portrayal, the considerations which drove the White Paper's conclusions, and the inconsistency of its interpretation of the mobile defense.

The intellectual architect of the 1993 edition of FM 100-5 was General Frederick Franks, TRADOC commander. Franks considered doctrine as "the engine of change" for a doctrine-based army. His intent for the new FM 100-5 was to provide a framework for a new "intellectual and physical posture" of the Army to better respond to greater uncertainty in a new strategic concept for Army forces.⁸⁸ As a construct for expansive intellectual consideration, the doctrine he produced was descriptive and concept-based. He drew heavily on his experiences as VII Corps commander in Operation Desert Storm which he described as a "Janus-like" operation: demonstrating both lessons of the past and "glimmerings of the future".⁸⁹ Franks recognized that history presented evidence of continuity in military operations. The future presented the challenge for adapting operations to exploit the continuity of past lessons in a changing environment.

Franks emphasized four principal components of the new doctrine: full dimensional operations, reliance on assets of the Total Army, force projection, and the refinement of the battlefield framework. Five concepts offered a new intellectual framework for warfare: battle command; battle space; depth and simultaneous attack; force projection and early entry employing split-based logistics and intelligence systems; and battle tempo. To encourage more expansive consideration of battlefield functions and operating systems, new terms were introduced to dispense with the "intellectual baggage" of existing terms.⁹⁰ "Striking force" reflects this thinking in relation to forces initially withheld from battle.

The mobile defense reflects these central concepts in the following manner. The defender seeks to employ surprise and the indirect approach to introduce the

striking force in the depth of the enemy formation while simultaneously engaging forward forces. This creates a reactive overload in the enemy commander's decision cycle. The enemy commander must develop a sufficient picture of the threat to decide on an appropriate reaction, halt the forward momentum of his attack, and reorient operating systems to effect his decision. During this period of reorientation, the defending force maintains a high tempo of operations to achieve decisive gains against the isolated flank force. Friendly operating systems degrade or destroy the temporarily desynchronized operating systems of the higher enemy command to prevent their concentration against the striking force. To create these effects, the friendly commander employs a refined battlefield framework which "relates forces to one another and to the enemy in time, space, resources, and purpose."⁹¹ The commander's goal is to maximize his force capabilities relative to enemy vulnerabilities in a given battlespace.

Franks felt that the new doctrine had "got it about right". In expanding the intellectual posture of the Army, the manual has been successful. In the past year, military periodicals have offered extensive articles from senior leaders discussing the doctrine's merits and shortfalls. The CAC study on the mobile defense focused on one such shortfall.

The White Paper made three recommendations. First, that the definition of the mobile defense be modified in FMs 100-5 and 100-5-1 to characterize the striking force as a "committed force organized to conduct the decisive attack as part of a mobile defense". Second, that the definition of the reserve in all manuals be modified to include the following statement: "Its primary purpose is to provide flexibility and retain the initiative through offensive action."⁹² The CAC study team remained consistent with the current definition of the reserve as an uncommitted force, a black and white concept, considering the designation of an "on order" mission to invalidate a force as a reserve. Third, that brigade

operations manuals reflect that "armored brigades can conduct mobile defenses when properly augmented, but will generally do so as part of a division or corps mobile defense." A lesser conclusion is addressed under Battle Command, stating that, "if available, a reserve should also be retained under the control of the senior commander."⁹³ We must analyze the logic behind these recommendations.

The original manual states the following:

Mobile Defense orients on the destruction of the enemy force by employing a combination of fire and maneuver, offense, defense, and delay to defeat his attack. The minimum force possible is committed to pure defense; maximum combat power is placed in a striking force that catches the enemy as it is attempting to overcome that part of the force dedicated to the defense....[It] requires a mobility greater than that of the attacker...Terrain is traded for maximum effect to divert the attention of the enemy from the defender's main force, overextending the attackers resources...set[ting] up large scale counterattacks that offer the defender the opportunity to gain and retain the initiative, going over to the offense and moving into exploitation and pursuit.⁹⁴

The CAC White Paper is correct in redefining the striking force. As the mobile defense is oriented on the destruction of the enemy by a combination of fires and maneuver, with the striking force constituting the defeat mechanism, the method is inherently offensive in Clausewitzian terms. For Clausewitz, the purpose of the defense was preservation; the offense, conquest.⁹⁵ While the mobile defense adopts the defensive method of acting second, the initiation of the striking force offensive is clearly not oriented on preservation, but on tactical conquest of the opposing force. The Striking Force is the "flashing sword of vengeance". The defensive actions of the forward forces are merely supporting engagements to facilitate this attack. The striking force is, therefore, the main effort of the defense, not an augmenting force.

In Chapter 10, the discussion continues:

Open terrain or a wide sector favors a mobile defense that orients on the enemy. The primary function of committed units in a

mobile defense is to control the enemy penetration pending a counterattack by a large reserve.

Commanders determine the mission, composition, and size of the reserve and counterattack forces. Reserves by definition are uncommitted forces. Reserve forces are not uncommitted if the commander's concept of defense depends upon their employment as a counterattack force to strike a decisive blow.

Mobile defenses sometimes rely on reserves to strike the decisive blow.⁹⁶

This portion of the manual is semantically contradictory concerning reserves. If, as stated, the defense awaits "a counterattack by a large reserve" then that force is the defeat mechanism. However, the manual proceeds to reinforce the doctrinal definition which precludes the use of reserves to strike a decisive blow necessary for the success of the operation. To resolve this difficulty, the CAC definition of the *striking force* lends clarity to the concept of a shaping defense to support a decisive attack by a force initially withheld from battle. The CAC team determined that the striking force required allocation of integrated assets of combat power up front, rather than after the shaping force was resourced. In this spirit GEN Franks used the new term to eliminate the baggage of providing only what's "left over" to the reserve.⁹⁷ In this context, the striking force serves one half of the traditional purpose of the reserve: to seize or retain the initiative through offensive action. Any remaining reserves, by default, provide a hedge against uncertainty.

The commander is willing to sacrifice limited resources to offset the risk of catastrophic failure in the shaping battle. Having initially allocated optimum levels of combat power to the striking force, extended frontage, challenging terrain, or an aggressive enemy may force a subsequent and grudging compromise of the desired striking force combat power as a mechanism for coping with risk. Failure to provide sufficient forces at the line of contact increases the risk of failing to create the decisive engagement. Any remaining risk must be considered residual for the commander to maintain a high probability of success in the operation.

The CAC White Paper states that aviation is well-suited for the reserve role because of its high mobility and lethality. The mobility and lethality of attack aviation makes it an ideal force to reinforce the shaping elements at the line of contact. The question, however, is whether attack helicopters, so employed, are reserves in accordance with the CAC definition. If the concept of operations tasks an aviation unit to reinforce the forward forces with aerial fires, the mission is "on order". As was the case with the Israeli ground reserves in 1973, it is merely the location of commitment which is in question. If the scheme of maneuver envision relies on an offensive action by an aviation unit, the element is "committed" by doctrinal definition and does not constitute a "true reserve".

The general function of the reserve, put another way, is to maintain the commander's freedom of action, which we will define as "the flexibility to decide when and where to accept battle".⁹⁸ The CAC White Paper on the Mobile Defense recognizes that this method of defense normally possesses greater levels of risk than the area defense. This risk is a function of the inferior relative combat power of the defender and a scheme of maneuver which allows the attacker's penetration of the defensive sector on an axis toward his desired objective. Greater depth extends the time in which the enemy commander can vary his scheme of maneuver. That equates to an extended window of uncertainty. As the enemy penetrates the area of operations, the striking force is engaged in a maneuver to gain the flank and rear of the enemy. The composition of a centrally controlled reserve in addition to the striking force seems intended to provide a means to respond to this developing uncertainty prior to the actual commitment of the striking force.

Who then is the bill-payer for this force?

The research has demonstrated that adopting the mobile defensive method is predicated by the possession of insufficient combat power to execute an area defense. By appropriately giving the striking force priority for the allocation of

combat power, the assets required to establish an additional reserve are provided at the cost of the combat power of forces at the line of contact.

Institutional Interpretation and Practice

Nearly a year after the publication of the CAC White Paper, opinions vary on the conclusions it drew, even among the community involved in its preparation. The paper is not a manual. It was issued to all divisions, corps, and army sub-unified commands; not to every holder of FM 100-5. Therefore, the level of its impact in the field is questionable. I spoke to a senior doctrine expert within CAC who was unaware of the paper's existence or its conclusions. We still face the certainty that doctrine as applied exists in the mind of the user.

The high risk levels associated with mobile defense dictate its use as a "defense of last resort". This was the primary opinion of the CAC study. When the National Training Center proposed inclusion of the mobile defense as a brigade task, the CAC team objected based upon this analysis.⁹⁹ The team did not see this task as appropriate for the brigade Mission Essential Task Lists.

The current director of Concepts and Doctrine Directorate (CDD), COL Ed Thurman, holds a more expansive view of the mobile defense. He feels that the increased capabilities of the intelligence and battle command operating systems, coupled with the American Army's tactical mobility advantages, will increasingly make the mobile defense an option of choice. The leveraging effects of the indirect approach offer potentially great rewards through rapid decisive victory consistent with the national strategy.¹⁰⁰

Thurman's view not only changes the conditions necessary for the mobile defense, but also the techniques for its employment. Mobility advantages and intelligence acquisition and tracking of enemy forces in depth may allow the commander to generate depth forward of the line of contact precluding the risk

associated with allowing penetration of the forward line. Such an option, however, lacks many of the reactive elements of the defense and more closely resembles a spoiling attack, engaging the enemy as he deploys for battle. Conversely, COL Thurman considers the 1954 technique appropriate to compensate for high risk levels due to uncertainty. This placed the striking force in battle positions in the depth of the sector for the decisive engagement. While this accounts for greater responsiveness to uncertainty, it limits the combat power employed against the depth of the enemy formation to attacks by ground and aerial fire support assets; opposing the enemy's leading echelons with the striking force.

This interpretation accepts risk as the controlling issue for the constitution and composition of reserves. When a commander chooses to employ the mobile defense, it implies great certainty in his ability to develop an accurate read of enemy intent and courses of action. This confidence generates the selection of an optimal solution in a low-risk environment, requiring few reserves. A lack of confidence implies high risk in which the commander is forced to adopt the mobile defense in a series of engagements because the inferiority of force ratios denies the likelihood of success in an area defense.¹⁰¹

COL Thurman's view reflects the Janus-like presentation of the mobile defense in FM 100-5. While it recognizes the improvisational nature of the method as adopted by Manstein and the IDF, it seeks to exploit the enhanced capabilities of our force in a changing environment of warfare. Nowhere in the descriptive manual is it implied that the mobile defense is a last resort option. The mobile defense as an option of choice is being institutionalized in our educational system. The core defensive tactics problems presented at the Command and General Staff College are predominantly mobile defense scenarios from the brigade to corps level. The practical application of the method as an option of choice when the risk of defeat is real has not yet been tested.

The final chapter considers whether we've "got it right".

V. Analysis and Conclusions

Since the Army was "historically unprepared for its first battle", it had to concentrate on winning the first battle of the next war....circumstances increased the need for a clear, coherent doctrine which could contribute to the combat efficiency and power of American forces by ensuring that each weapon system was employed in the best possible fashion.

Robert Doughty¹⁰²

The research question considers whether, for successful conduct of a mobile defense, the executing commander must or can wisely constitute what might be differentiated as a "true" tactical reserve in addition to a striking force. It considers the central issue of Robert Doughty's assertion that doctrine must provide a framework to maximize available combat power to produce decisive effects.

It has become increasingly clear that to determine the purpose of reserves and the striking force in the mobile defense, we must clarify the purpose of the mobile defense. The mobile defense is directed toward the destruction of the enemy force. Terrain is significant only in terms of the tactical advantages that it provides to overwhelm the enemy. Mobile defense seeks to wrest the initiative from the enemy force through *surprise offensive action*. A large, offensively capable force, withheld from initial contact, executes an attack which forces the enemy commander into a reactive decision cycle and maintains a tempo of operations that expands his decision-to-execution gap. This desynchronizes enemy operating systems and allows their piecemeal destruction.

The mobile defense is maneuver warfare. The fluid nature of maneuver warfare requires a command system that accepts confusion and disorder and operates within it while generating a level of confusion for the enemy which prohibits cohesion of his operation. The key to this balance is the maintenance of an appropriate tempo of operations controlled by the friendly, senior commander.

The existence of confusion and disorder within his own operations implies a level of uncertainty that a commander must accept to gain decision.

The critical first step in generating sufficient confusion to create a decision gap for the enemy is to effect surprise in the initial offensive action. To achieve this, the commander must have assets in place to observe the enemy and identify potential weakness. He must have sufficient confidence in the accuracy of this intelligence picture to offer acceptable risk levels to initiate the counterstroke. The defeat mechanism is enabled when the offensive maneuver force, initially withheld from battle, attacks and the priority for the higher command's general support assets shifts to that main effort.

Current doctrine identifies two maneuver forces which are initially withheld from battle. A "striking force" is specifically composed to conduct offensive actions to seize the initiative and/or gain decision. A "reserve" may have a positive or negative purpose. The Combined Arms Command study correctly asserted that the distinction may be semantically useful to delineate the commander's intent in organizing combat power for execution of the mobile defense. The study does not clearly demonstrate the need or the sufficiency of assets in a mobile defense scenario to compose an additional reserve.

The striking force fulfills the need for a formation to conduct offensive actions. The remaining function of the reserve is to respond to unexpected contingencies in the course of battle. The relevant risk factor for the composition of a "true" reserve is uncertainty concerning the enemy course of action. There appear to be two risk windows. The first is prior to commitment of the striking force. The enemy may choose a course of action which the friendly commander did not anticipate. This would deny the defender the ability to employ the striking force in the manner envisioned and would invalidate the concept of the mobile defense. The situation would demand an alternative employment of the striking force. The

striking force would now become a reserve; a force available for decisive engagement.

The striking force must be available as an integral unit not later than the time at which the enemy action triggers the commitment decision. Early withdrawal of the striking force from contact to provide maximum freedom of action is a theoretical ideal. Manstein's operations at the Donetz River show that a determined, numerically superior force may prevent this. If the assembly of the striking force is delayed, the senior commander is well-served to maintain a force capable of fixing or delaying an attacker en route to the engagement area until the striking force is positioned. The specific situation will dictate whether a ground maneuver force or an aviation unit is most appropriate to meet this need.

The commander's greatest level of risk occurs following the initiation of the striking force attack. This risk involves the striking force's potential inability to close on the enemy rapidly enough to gain positional advantage. Enemy intelligence systems could acquire the striking force and employ assets to fix it in the attack position or to block its approach march. The combat power of the striking force should limit the duration of any such dealying action. To execute his concept, the friendly commander must create an equivalent delay in the advance of the enemy formation to allow closure by the striking force. This is relevant risk and the commander must have the freedom of action to respond to it.

What are the viable options for such a fixing force and are they truly reserves? In the Battle of the Donetz and on the Golan Heights, mobile ground forces from less threatened sectors were laterally repositioned to counter significant-risk enemy actions as paucity of resources precluded maintenance of centrally-controlled reserves. On the modern battlefield, attack helicopters and ground support aircraft can respond rapidly over broad ranges with devastating effects against armored forces. Aviation units cannot hold terrain, but the

commander only seeks to reduce his risk level by delaying the advance of the attacker to enable closure of the striking force. Aviation can accomplish this task. The commander's expectation of the likelihood of such action determines whether such a force qualifies as a "true" reserve.

The augmenting assets of the controlling headquarters leverage the striking force's combat power and reduce risk by supporting the maneuver action. The emphasis on force destruction requires that the striking force have great freedom of action. This implies the need for reserves *within* the striking force organization to exploit maneuver opportunities. This added freedom to *sustain* action increases the enemy commander's paralysis and, by minimizing his flexibility, reduces risk to the friendly force. The forward defensive force is granted sufficient combat power to shape the attack of a synchronized enemy. They possess greater relative combat power to oppose localized threats when the striking force blow desynchronizes the enemy's assets. Composite risk is reduced. A reserve is not required.

Our Army is preoccupied with the notion of an uncommitted reserve. The concept of "true" reserves is a fallacy. Reserves are established with priorities for planning; their employment at decisive points in the battle is expected. From their birth in ancient warfare, the primary purpose of tactical reserves has been to seize or maintain the initiative through offensive action. Constitution of a reserve without an intent for its employment suboptimizes the opportunity for destruction of an enemy force.

The size of reserves is a function of risk. Risk is a function of uncertainty and the stakes involved in the operation. In force projection operations, strategic considerations are likely to constrain the acceptable risk levels of tactical formations. Operating under strategic risk constraints, the mobile defense is rarely viable except as a method of last resort. Last resort options lack sufficient resources to constitute reserves.

With low risk, only small reserves are appropriate. Low uncertainty is a function of a limited range of options available to the enemy commander or may be a function of the super-abundance of friendly force resources. In a low risk situation, the commander seeks to employ his optimal solution for force destruction by rapidly concentrating combat power at the line of contact. As the nature of mobile defense entails a large area of operations, limited ground reserves may be unable to respond rapidly across the breadth of the line of contact. A more effective distribution of resources would be to increase the combat power of forward elements above the minimum to provide them greater flexibility in the shaping battle. To counter residual risk, the senior commander may require subordinates to gain approval to commit these reserves.

Our ground force active component combat strength will soon be ten divisions. While the IDF could rely on rapid reinforcement of the tactical battle from the strategic base, US force projection capabilities limit available combat forces during initial entry. Strategic risk limitations may deny the commander's consideration of the mobile defense as an option until sufficient force is generated in the theater to concentrate combat power for strike operations. Based on the Mobility Requirements Study, at C+15, a heavy brigade, under the control of a light division, could provide the mobility necessary for a striking force against a small enemy force (Appendix C). Viability increases with the arrival of heavy divisions at C+30. When early entry forces are *required* to adopt a mobile defense as a last resort, the mobility and lethality of attack aircraft may provide the means to successfully execute a flexible shaping battle at the line of contact. The paucity of combat power assets, however, will make such aerial forces essential to the success of the operation. They will be *committed forces*, not reserves.

Robert Doughty summarized that the most difficult obstacle for counterinsurgency operations during the Viet Nam era was the mental redirection

and re-education of officers and soldiers.¹⁰³ We cling to that which is comfortable. The striking force is "a reserve with a mission" pending identification of a time and place. The terminology is a semantic mechanism designed to enhance decision by proper allocation of combat power to a force that will become the main effort. The lingering concept of "true reserves" detracts from the mobile defense intent and ignores strategic realities in a force projection environment. Our staffs must assess the assumptions which drive adoption of the mobile defense and seek alternate means to cope with uncertainty rather than clinging to the dogma of "true reserves."

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- ⁷⁵Ibid, p. 367.
- ⁷⁶Ibid., p. 369.
- ⁷⁷Ibid, p. 421.
- ⁷⁸Army Detachment Hollidt was the reconstituted remnants of 6th Army. Although certain references identify the force as 6th Army, this causes confusion. As Manstein did, I will refer to the unit as Army Detachment Hollidt or Det. Hollidt.
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- ⁸²Ibid, p. 202.
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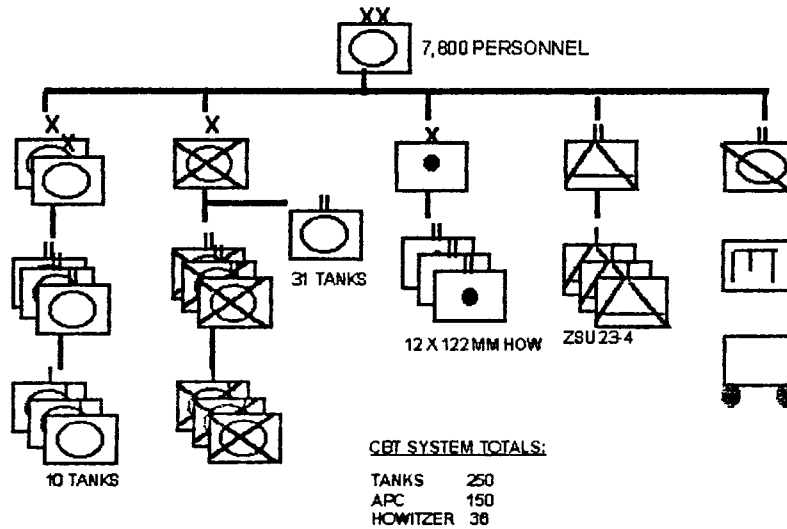
Field Manual 100-5-1, Operational Terms and Graphics (Initial Draft). Washington, DC: U.S. Govt. Printing Office, 1994.

_____, Memorandum, US Army TRADOC, DCG for Combined Arms, Subj: Doctrinal Update-The Mobile Defense, 11 Jan 94.

_____, III Corps Maneuver Booklet. May 1987.

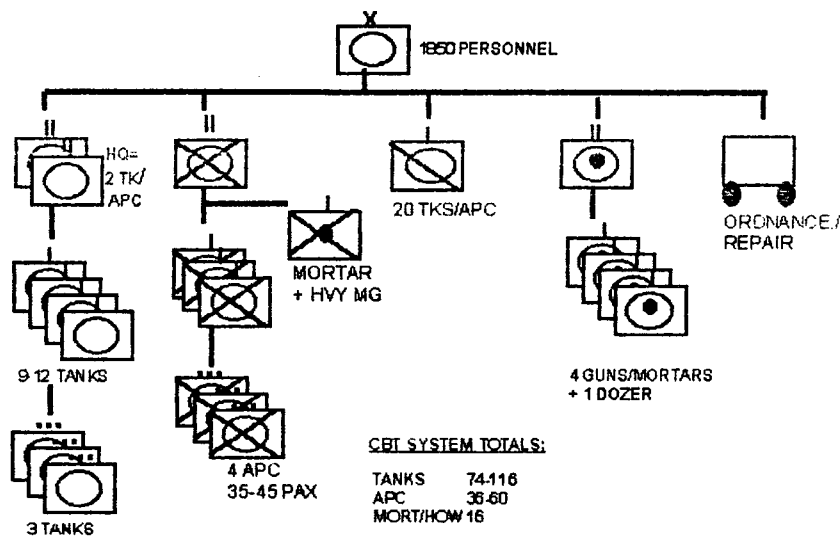
Summary of Combined Arms Command Seminar on the Mobile Defense and FM 100-5, chaired by GEN (Ret) Richard Cavasos, 25 May 1993.

ARAB TANK DIVISION



*Mer. Frank, *October 1973: The Arab-Israeli War*, Hamden, CT, Arcos Books, 1985, p.148.

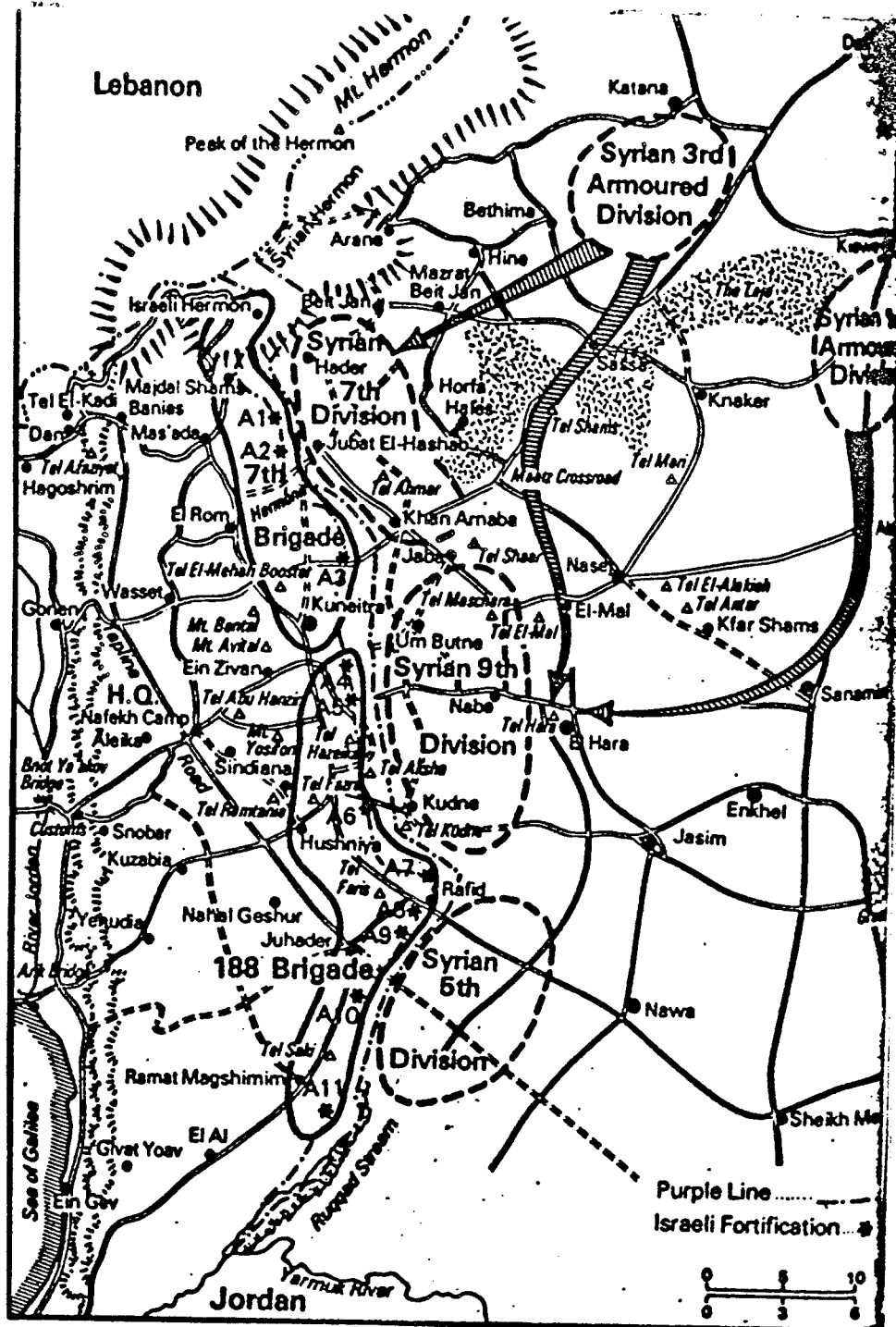
ISRAELI TANK BRIGADE



BRIGADE=CHATVAH
DIVISION=UGDAH (2-3 BDES)

*Mer. Frank, *October 1973: The Arab-Israeli War*, Hamden, CT, Arcos Books, 1985, p.148.

GOLAN HEIGHTS
SITUATION ON 6 OCT 1973, 1400



*From Chaim Herzog, *The Arab-Israeli Wars*,
New York: Random House, 1984, p. 286

Lebanon

Peak of the Hermon

Syrian Hermon

Katana

Syrian 3rd Armoured Division

Bethina

Arane

Hine

Mazra

Bait Jan

Horfa

Hales

The Liza

Knaker

Syrian 1st Armoured Division

Majdal Shams

Mas'ada

Banias

Jubet El-Hashaba

Avit

Hermon

El Rom

Eitan

Tel El-Mehali Booster

Mt. Bartal

Mt. Avital

Ein Zivan

Um Butne

Kuneitra

A3

Khayr-naba

Tel Shear

Nasei

Tel Mari

Abab

Tel El-Alakieh

Tel Antar

Kfar Shams

El-Mal

Tel El-Mal

Tel Hara

El Hara

Sanamin

Jasim

Nawa

Sheikh Ma

Syrian 7th Division

A3

Jaba

Tel Maschara

U Nap

Tel Hara

El Hara

Syrian 9th Division

Kudne

Tel Kudne

A5

Tel Fars

Rafid

Syrian 5th Division

A9

Tuhader

A10

Tel Suf

A11

Ramat Magshimim

Garnia Rise

El Al

Givat Yoav

En

Jordan

Yarmuk River

Sea of Galilee

River Jordan

Ort's Bridge

Yahudi

Nahal Geshur

Kuzabie

Abu Hana

Mt. Yositon

Tel Ramana

Hushniya

Tel Alsha

Tel Hareda

Tel Alsha

Tel Kuzabie

Tel Fars

Rafid

Syrian 2nd Division

Syrian 1st Division

Syrian 4th Division

Syrian 6th Division

Syrian 8th Division

Syrian 10th Division

Syrian 11th Division

Syrian 12th Division

Syrian 13th Division

Syrian 14th Division

Syrian 15th Division

Syrian 16th Division

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Syrian 93rd Division

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Syrian 95th Division

Syrian 96th Division

Syrian 97th Division

Syrian 98th Division

Syrian 99th Division

Syrian 100th Division

Legend:

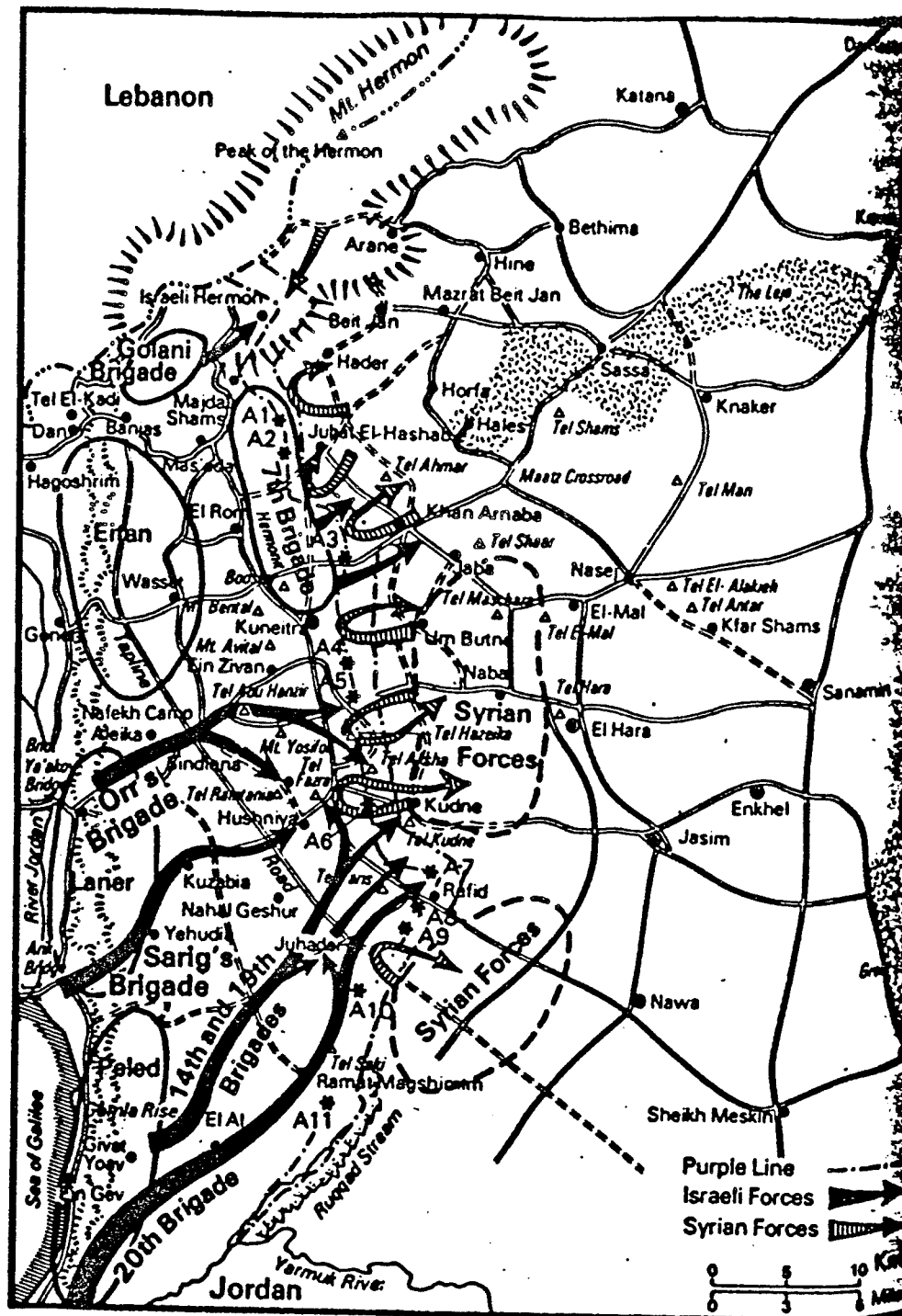
Purple Line Syrian Forces

Solid Line Israeli Forces

Scale: 0 5 10 km, 0 3 5 miles

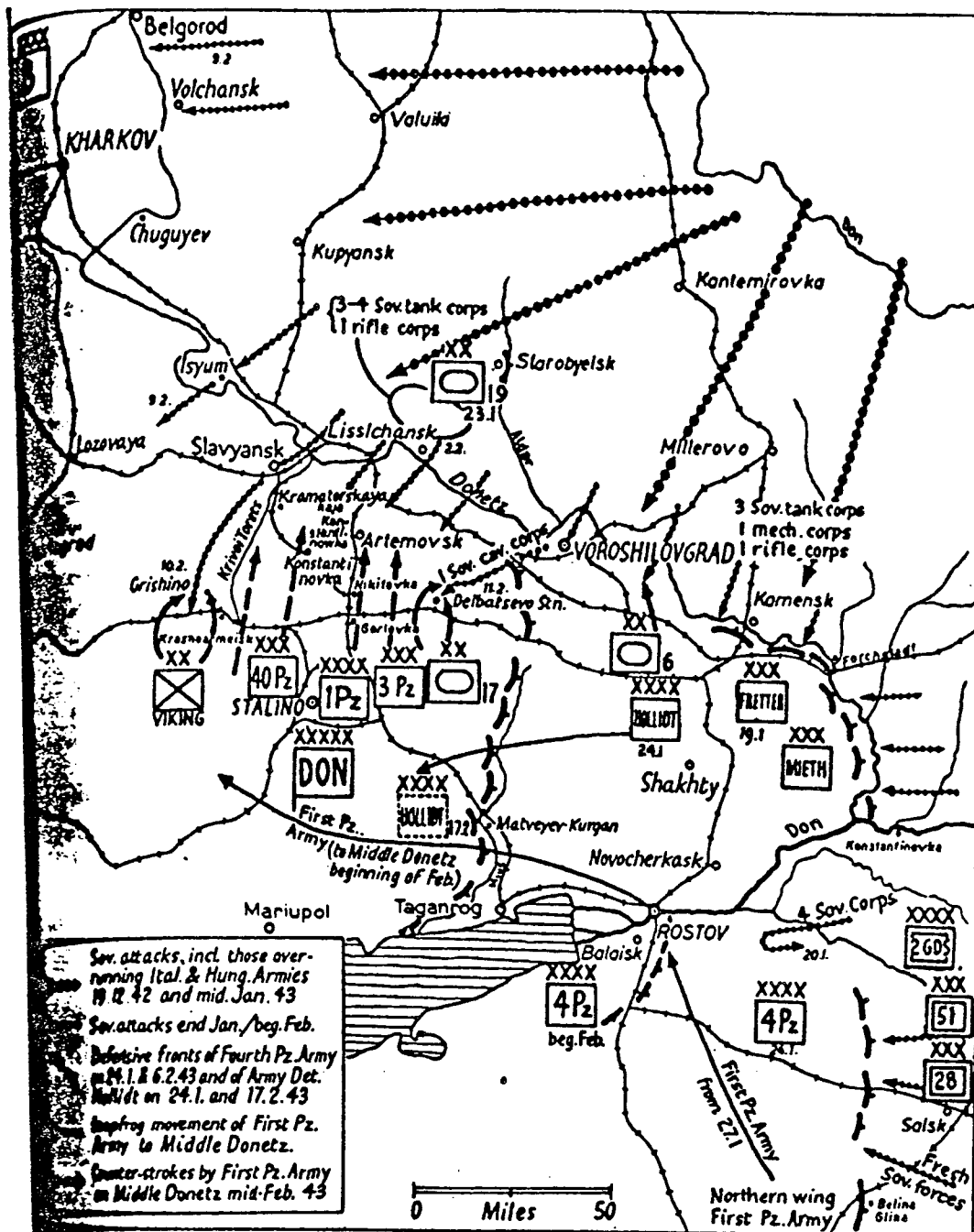
A-3

GOLAN HEIGHTS SITUATION ON 10 OCT 1973



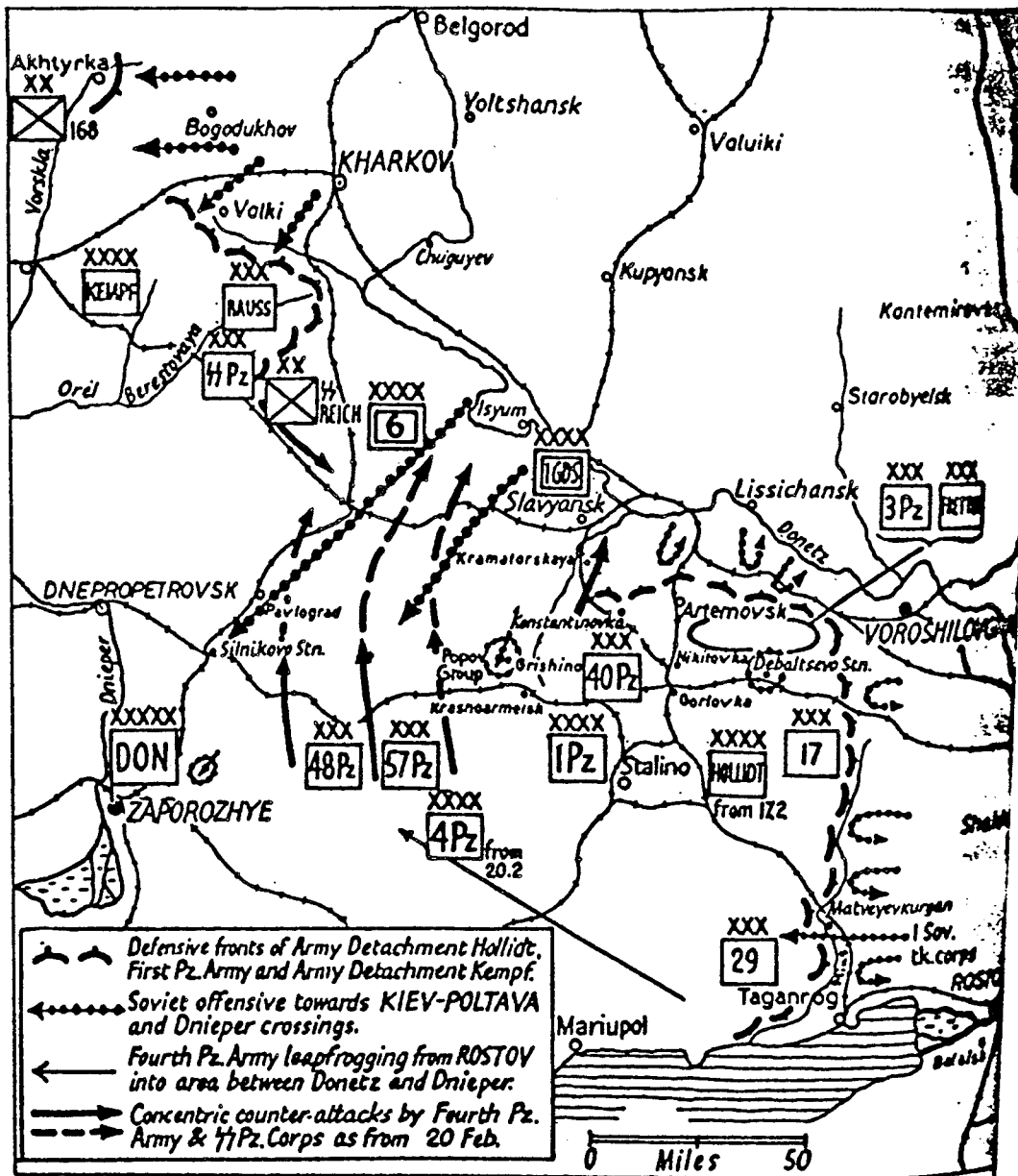
*From Chaim Herzog, *The Arab-Israeli Wars*,
New York: Random House, 1984, p. 292

BATTLE OF THE DONETZ GROUP DON MOVEMENTS, JAN-FEB 1943



*From Erich von Manstein, *Lost Victories*,
Novato, CA: Presidio Press, 1985, p. 391

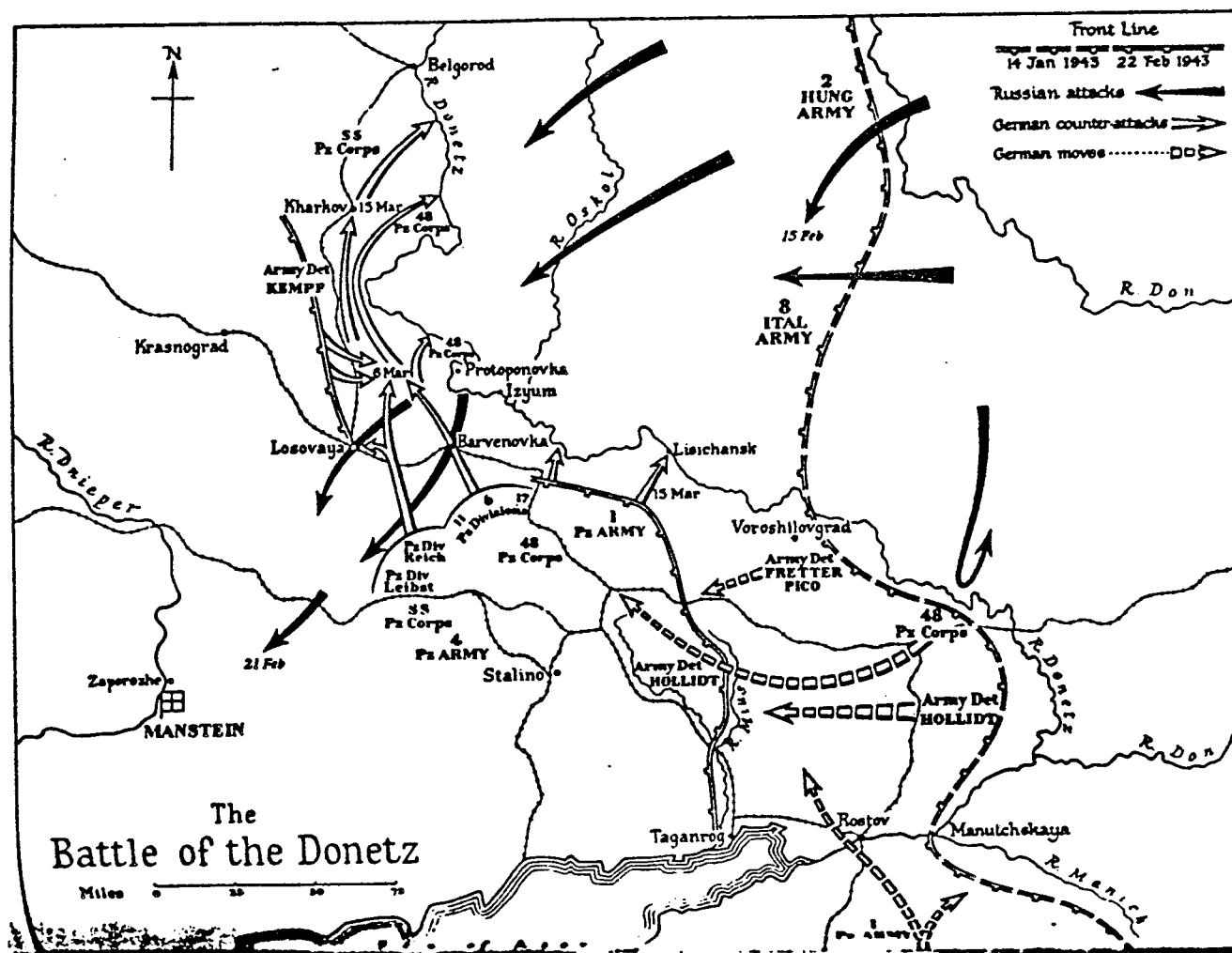
BATTLE OF THE DONETZ GROUP DON SITUATION, 20 FEBRUARY



*From Erich von Manstein, *Lost Victories*,
Novato, CA: Presidio Press, 1985, p. 430

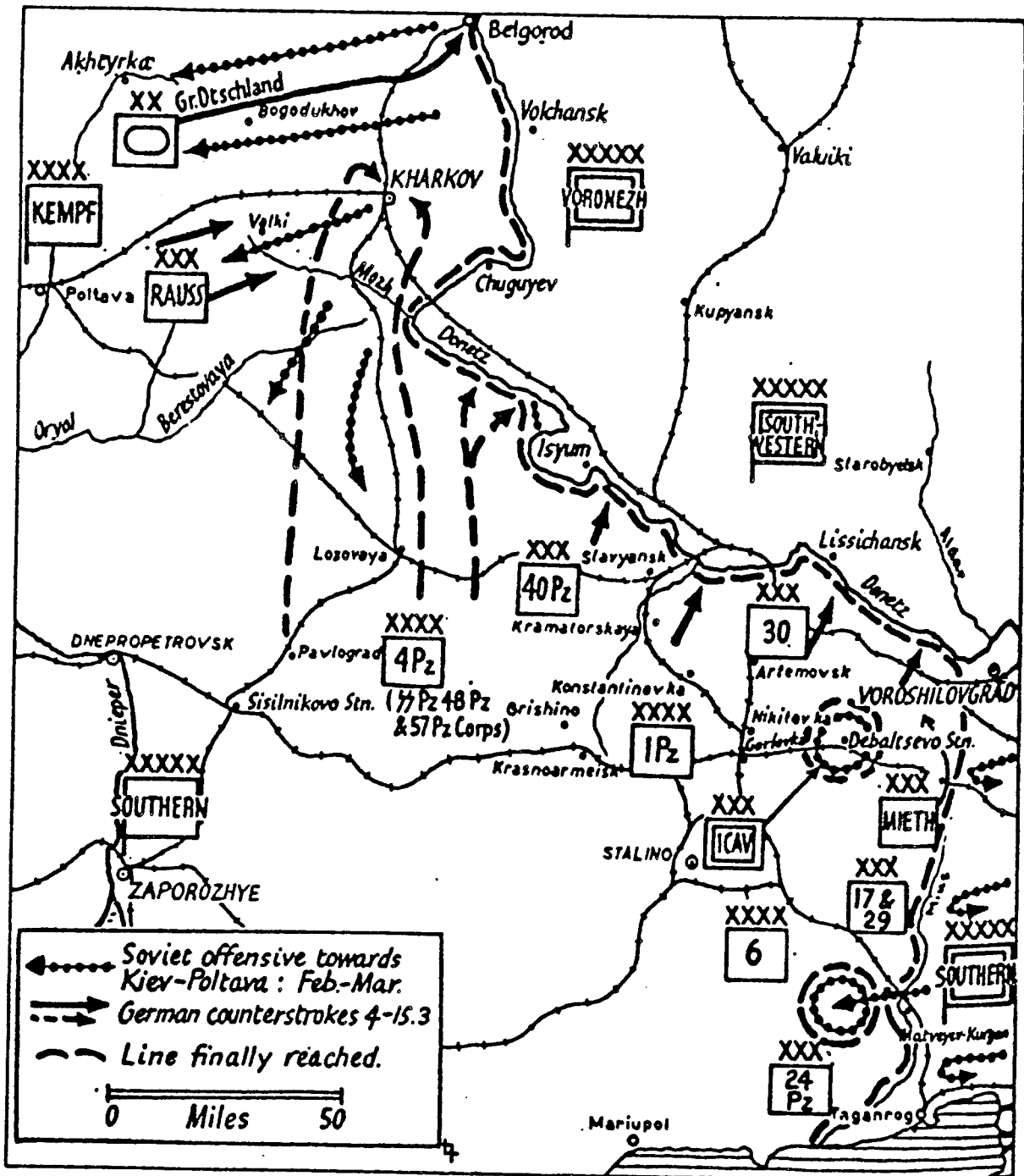
BATTLE OF THE DONETZ

4 PANZER ARMY COUNTERATTACK, FEBRUARY 1943



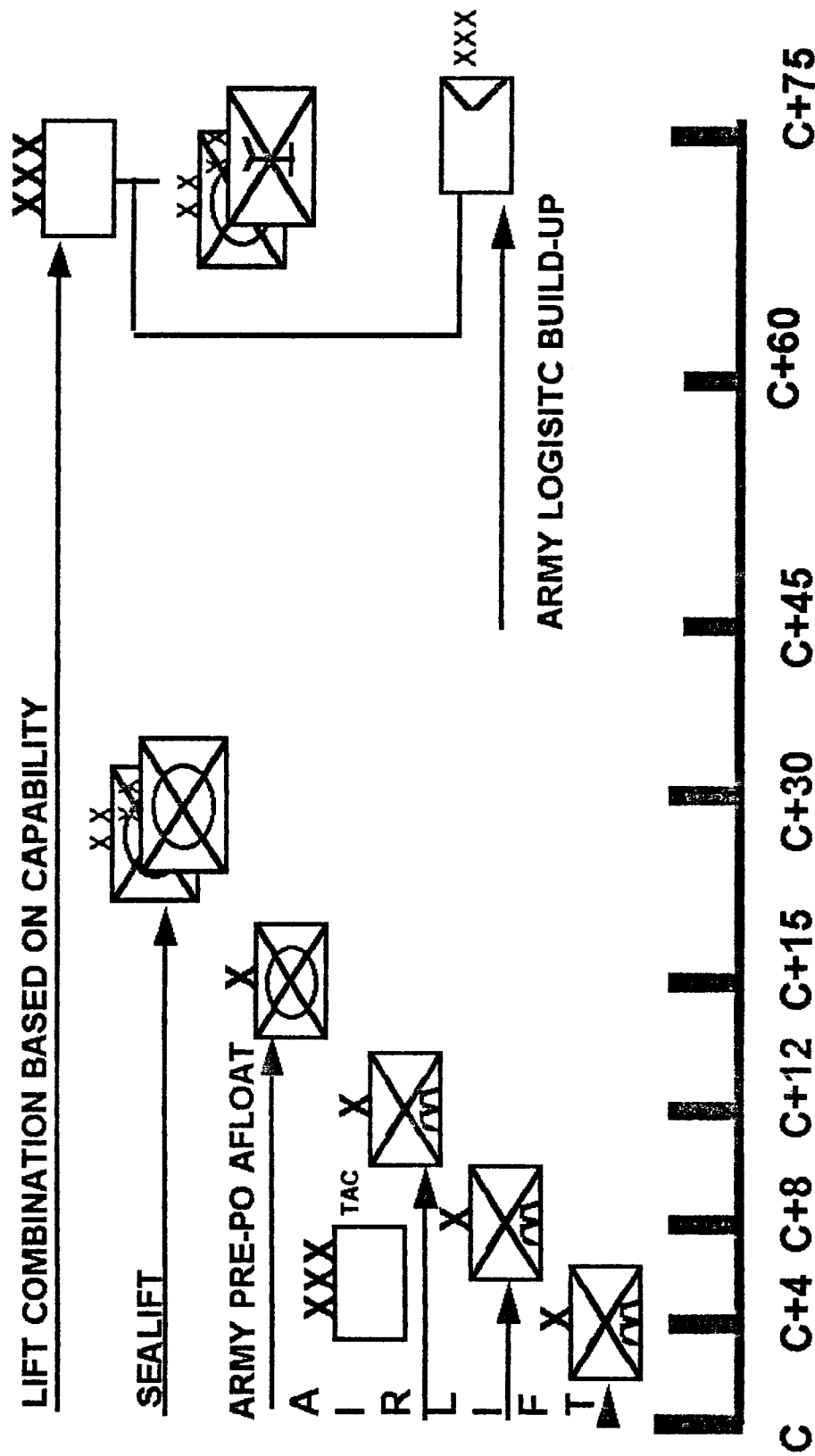
*From F.W. von Mellenthin, *Panzer Battles*, Norman, OK:
University of Oklahoma Press, 1956, Map insert
B-3

BATTLE OF THE DONETZ GROUP DON MOVEMENTS, MARCH 1943



*From Erich von Manstein, Lost Victories,
Novato, CA: Presidio Press, 1985, p. 434

US FORCE PROJECTION GENERATION OF COMBAT POWER



Chilcoat, R. and Henderson, D. "Army Prepositioning Afloat",
Joint Forces Quarterly, Spring 1994, no. 4, pp. 51-57.